

2nd
B1
A3

7. (Amended) An absorbent article comprised of a liquid-permeable topsheet, a liquid-impermeable backsheet and an absorbent member interposed between said topsheet and said backsheet, at least one of said layers of said absorbent article being comprised of said bulky sheet material of claim 1.

Please add the following new claim 9:

5th
B1
A4

- - 9. A bulky sheet material having three-dimensional protrusions comprising a first layer and a second layer adjacent to the first layer, said first layer and said second layer being partly joined together at joints in a predescribed pattern, said first layer being formed by carding and having a number of bulky protrusions filled with fibers which are located among said joints, said second layer comprising a material which exhibits elastomeric behavior, and said bulky sheet material exhibiting elastomeric behavior as a whole and breathability.- -

REMARKS

Claims 1-3 and 5-9 remain pending after amendment.

Claim Amendments

By this amendment, the limitations of claim 4 are incorporated into claim 1. The dependency of claim 5 is amended accordingly. An editorial amendment is made to claim 7. New claim 9 is added directed to a preferred embodiment, support for which resides at page 10, lines 1-8 of the specification and corresponding to the embodiment of Figure 2. No new matter is added by this amendment.

Rejection of Claim 1 under 35 USC 102(b)

Claim 1 stands rejected under 35 USC 102(b) as being anticipated by Vander Wielen U.S. Patent No. 4,720,415.

In support of the rejection, the Examiner makes reference to the Abstract and Figure 2A of the reference. This rejection respectfully is traversed to the extent deemed to apply to the claims as amended.

In applicants' claimed invention, as now defined by amended claim 1, the bulky sheet material is comprised of first and second layers partly joined together, with the first layer having a number of raised portions, with the second layer comprising a fiber aggregate comprising fibers which are made of a thermoplastic polymer and exhibit thermal shrinkability and

elastomeric behavior, and said first layer comprising a fiber aggregate which comprises fibers which are made of a thermoplastic polymer and which have substantially no thermal shrinkability or do not shrink at or below the thermal shrinkage temperature of the fibers exhibiting thermal shrinkability.

Applicants' sheet material is formed by superimposing the first and second layers of fiber aggregate and subjecting the superimposed layers to heat treatment, whereby the elastomeric fiber aggregate of the second layer shrinks, while the fiber aggregate of the first layer does not - thus forming the raised portions in the first layer due to the contraction (shrinkage) of the elastomeric second layer.

By contrast, the sheet material of the reference is formed by elongating an elastic web while bonding same to an adjacent gatherable layer, after which the elastic web is permitted to become relaxed at which time the gatherable layer becomes gathered at spaced apart locations. It is not the intent of the reference that the elastic web be heat shrinkable while retaining its elasticity as required by applicants, whereby "gathered portions" are formed in the adjacent non-heat shrinkable layer upon shrinkage of the heat shrinkable layer.

Given such distinctions, the rejection is without basis and should be withdrawn.

Rejection of Claims 2-5 and 8 under 35 USC 103(a)

Claims 2-5 and 8 stand rejected under 35 USC 103(a) as being unpatentable over Vander Wielen in view of Schleinz et al U.S. Patent No. 5,612,118.

Schleinz is cited to teach that a joined layer can be gathered by elastic fibers that are heat shrunk, citing column 8, lines 1-10. The Examiner accordingly takes the view that it would have been obvious to use heat shrinkable fibers to gather the web of Vander Wielen. This rejection respectfully is traversed to the extent deemed to apply to the claims as amended. .

The deficiencies of Vander Wielen are discussed at length above. Such deficiencies are not cured by the Examiner's citation of Schleinz.

The elastic layer 52 of Schleinz is not a "fiber aggregate" as required in applicants' claims - the reference instead teaches that the layer 52 is comprised of "any suitable elastic material, and can be in the form of a flat sheet or layer of elastic material or a plurality of strands, ropes or the like,

of elastic material." See column 4, lines 36-40 of the reference.

The Examiner's combination of the cited references must fail for several reasons. First, Schleinz does not teach the use of a fiber aggregate as the elastic layer. Secondly, no motivation or suggestion resides in either of the references to replace the elastic layer of Vander Wielen with the heat shrinkable layer 52 of Schleinz. Indeed, the modification of Vander Wielen in the manner suggested by the Examiner would result in a sheet material of diminished permeability in contrast to that achieved by applicants' invention.

Method claim 8 is directed to the formation of the first layer by carding, which results in the formation of "filled protrusions" as depicted in applicants' Figure 2. Such an embodiment is neither disclosed nor suggested by the cited references.

In view of the above, the rejection is without basis and should be withdrawn.

Rejection of Claims 6-7 under 35 USC 103(a)

Claims 6 and 7 stand rejected as being unpatentable under 35 USC 103(a) as being unpatentable over Vander Wielen in view of Schleinz and Zelazoski et al. This rejection respectfully is traversed to the extent deemed to apply to the claims as amended.

The deficiencies of both the Vander Wielen and Schleinz references are discussed above. The additional citation of Zelazoski et al. does not overcome such deficiencies. Indeed, the mere application of Zelazoski to teach the presence of "perforations" does nothing to address the inadequacies of the primary references.

The rejection is thus without basis and should be withdrawn.

Embodiment of New Claim 9

New claim 9 is directed to an embodiment wherein the bulky protrusions are filled with fibers, with the first layer which contains the bulky protrusions being formed by carding. This embodiment is depicted in applicants' Figure 2. Such an embodiment is neither disclosed nor suggested by the cited prior art.

Indeed, applicants teach at page 10, lines 4-9 of the specification that the use of filled protrusions as recited in claim 9 as opposed to hollow protrusions enables advantages to be achieved with respect to the transporting and retaining of highly viscous fluids while exhibiting high compressive deformability when compressed in the thickness direction. Neither the embodiment of new claim 9 (nor the corresponding method claim 8) is taught by the references and should accordingly be found to be allowable.

The application is now believed to be in condition for allowance and an early indication of same is earnestly solicited.

In the event that any outstanding matters remain in this application, Applicants request that the Examiner contact James W. Hellwege (Reg. No. 28,808) at (703) 205-8000 to discuss such matters.

Applicant respectfully petitions under the provisions of 37 CFR 1.136(a) and 1.17 for a one-month extension of time in which to respond to the Examiner's Official Action. The Extension of Time fee in the amount of \$110.00 is attached hereto.

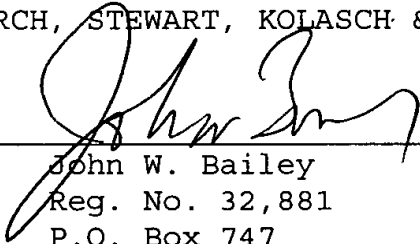
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit

any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Very truly yours,

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CLAIM AMENDMENTS WITH MARKINGS TO SHOW CHANGES

The claims are amended as follows:

1. (Amended) A bulky sheet material having three-dimensional protrusions comprising a first layer and a second layer adjacent to the first layer, said first layer and said second layer being partly joined together at joints in a prescribed pattern, said first layer having a number of raised portions which are located among said joints, said second layer comprising a material which exhibits elastomeric behavior, and said bulky sheet material exhibiting elastomeric behavior as a whole and breathability, and

wherein said second layer comprises a fiber aggregate comprising fibers which are made of a thermoplastic polymer and exhibit thermal shrinkability and elastomeric behavior, and said first layer comprises a fiber aggregate comprising fibers which are made of a thermoplastic polymer and have substantially no thermal shrinkability or do not shrink at or below the thermal shrinkage temperature of said fibers exhibiting thermal shrinkability.

5. (Amended) The bulky sheet material according to claim [4] 1, wherein said second layer comprises a fiber aggregate comprising latent crimping fibers.

7. (Amended) An absorbent article comprised of [The bulky sheet material according to claim 1, which is for use as a part of elements constituting an absorbent article having] a liquid-permable topsheet, a liquid-impermeable backsheet and an absorbent member interposed between said topsheet and said backsheet, at least one of said layers of said absorbent article being comprised of said bulky sheet material of claim 1.